2d. When the planet is compared with the north limb of the sun.

1848.	Greenwich M.T.	N.P.D. Mercury — N.P.D. Sun.	Limb Planet Obs^d.		Greenwich M.T.	N.P.D. Mercury — N.P.D. Sun.	Limb Planet Obs^d.
	h m s	′ ″			h m s	′ ″	
Nov. 9	1 36 39·3	−1 59·2	Both	Nov. 9	1 58 56·7	−2 52·4	Both
	38 53·9	2 3·9	Do.		2 1 1·4	3 0·4	Do.
	40 39·7	2 7·7	Do.		(4) 0·9	3 4·7	Do.
	45 28·9	2 19·4	Do.		18 46·0	3 40·8	Do.
	47 13·5	2 25·5	S.		19 54·3	3 44·4	Do.
	49 13·2	2 22·3	Cent.		23 22·8	3 50·9	S.
	51 12·9	2 31·3	S.		25 32·4	3 59·8	Both
	54 35·4	2 42·9	Both		2 27 5·2	−4 5·3	N.
	1 56 21·1	−2 46·3	Do.				

"When the number of minutes is placed within brackets, there is an uncertainty of a minute.

"In the earlier part of the observations, the sun's limb was ill-defined in the equatoreal; but it was well seen afterwards. The sun's image received on a screen was very clear throughout the observations."

Mr. Thompson made some observations in right ascension with the Fraunhofer equatoreal at the beginning of the transit, but the sun's limb was so badly defined and the wind so troublesome at that time, that he does not place any reliance on them.

IRIS.

LIVERPOOL.   Equatoreal.   (Mr. Hartnup.)

1848.	Greenwich M.T.	R.A.	Log $\frac{p}{P}$	N.P.D.	Log $\frac{q}{P}$	Star.
	h m s	h m s		° ′ ″		
Dec. 21	13 24 11·7	10 26 55·39	−8·474	86 38 9·7	−9·889	a
	14 0 22·7	55·62	8·400	16·3	9·887	a
	14 31 53·6	55·84	8·313	22·7	9·885	a
1849. Jan. 3	14 18 31·8	10 27 8·33	8·188	87 30 30·3	9·890	b
	14 53 12·5	8·11	−8·129	33·4	−9·889	b

a......B.A.C. 3684   b......B.A.C. 3600

The places of the stars are taken from the catalogue. Log $\frac{p}{P}$ and log $\frac{q}{P}$ have the signification given to them by Professor Challis, in vol. viii. p. 206, of the *Monthly Notices.*

HAMBURG.   Equatoreal.   (M. C. Rümker.)

1848.	Hamburg M.T.	R.A.	Decl.
	h m s	° ′ ″	° ′ ″
Dec. 10	15 21 14·7	155 42 48·5	+4 26 51·8
14	13 21 56·3	156 10 45·7	4 1 32·4
19	13 13 47·0	36 22·2	3 32 34·0
20	13 0 2·0	40 13·8	27 23·7
21	12 43 1·6	43 37·4	22 13·8
24	12 39 59·8	51 27·5	3 7 17·6
26	12 12 34·6	54 21·0	2 58 37·1
28	12 10 20·9	156 55 21·5	+2 50 18·7

Meridian Circle.

1848.	Hamburg M.T. h m s	R.A. ° ′ ″	Decl. ° ′ ″
Dec. 28	16 6 50·3	156 55 19·1	+2 49 39·7
29	15 52 54·5	54 56·3	45 48·4
1849.			
Jan. 1	40 53·8	51 40·9	35 26·2
2	36 49·2	49 31·8	32 18·6
3	32 43·6	47 4·2	29 26·6
4	15 28 35·8	156 44 3·0	+2 26 43·5

Elements.   By Mr. Norman Pogson.

Epoch 1849, Jan. 0·0, Greenwich M.T.

		° ′ ″
Mean Anomaly	....	68 44 5·05
π	....	41 21 2·43 ⎫ Mean Equinox,
Ω	....	259 47 14·88 ⎭ 1849, Jan. 0·0
i	....	5 28 13·74
φ	....	13 19 42·20
e	....	0·2305366
Log a	....	0·3772307
a	....	2·3835872
Log q	....	0·2634187
q	....	1·8340821
Log μ	....	2·9841605
μ	....	964″·1851
Sid. Period	....	1344·139 days.

From observations made in 1848, at Cambridge on Feb. 17th, and at South Villa on Aug. 7th and Dec. 13th.

The above elements, when compared with the middle observation, give the following equations :—

Observed—Computed.

In Longitude.. = +0″·83

In Latitude .... = +0·14

FLORA.

Hamburg.   Equatoreal.   (M. C. Rümker.)

1848.	Hamburg M.T. h m s	R.A. ° ′ ″	Decl. ° ′ ″
Dec. 24	17 14 36·1	207 11 12·7	−5 37 14·2
28	17 0 19·0	208 28 56·0	5 58 51·5
29	17 45 7·5	208 48 48·8	6 4 21·7
1849.			
Jan. 2	17 35 10·2	210 3 40·7	6 23 35·9
3	16 55 51·0	210 21 17·4	−6 28 1·5